

Evaporation Investigation

Topic: Atmosphere

Objectives: Discover evidence of evaporation

Grade Level: pre K - 6

Time: 20 – 25 minutes

Vocabulary:
evaporation
vapor

Materials: clear plastic cups, small sandwich bags with twist ties, spray bottles, permanent marking pens

Location: Active Oval, Saturn Playground

Background: Can evaporation be seen? Can it be felt? In this activity you will “capture” evaporation and discover its effects on the air, on plants and on your skin.

Advance Preparation: Fill spray bottles with water. Explain to the students that they are setting “traps” to capture evaporation.

Procedure:

Part A:

1. Choose a partner. Together with your partner, collect a clear plastic cup and a plastic bag and twist tie from your activity leader. Use the marking pen to mark your cup and your bag so that you will recognize them later.
2. Find a sunny spot and place your plastic cup upside down on the ground. If the weather has been dry for some time, spray the ground with water from a spray bottle before you place your cup on it. Weight your cup down by positioning a small rock on the turned up bottom of the cup. Do not pick up or disturb your cup for 15 – 20 minutes.
3. Locate a leafy branch of a tree or shrub that you can reach. Carefully slip your plastic bag around the branch. Be sure to enclose several leaves in your bag. Seal the bag by wrapping a twist tie around the bag and the branch near the open end of the bag. Do not disturb the bag for 15 – 20 minutes.
4. While you wait to see if you catch any evaporation in your evaporation traps, return to your activity leader and do the activity in part B.

5. After 15 – 20 minutes, check your evaporation traps for evidence of evaporation.
6. Collect your cup and your bag and dispose of them properly.

Part B:

1. Gather in a circle around your activity leader.
2. Hold out one hand for your activity leader to spray with water from a spray bottle. As soon as your hand is sprayed, hold both hands in the air over your head.
3. What differences do you notice between your dry hand and your wet hand? How does evaporation feel?

Questions to think about and discuss:

1. What evidence of evaporation did you find in your plastic cup or plastic bag?
2. What do you suppose caused the water vapor in the plastic cup? Why is there water vapor in the plastic bag?
3. What areas of Piedmont Park do you suppose contribute the most water vapor to the atmosphere?
4. How do you think evaporation assists the plant's life cycle?
5. How does your body benefit from evaporation?
6. What do you suppose would happen if there was no evaporation on earth?